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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/779,419	02/13/2004	Robert H. Wollenberg	T-6318A (538-69)	9057

7590 05/13/2010  
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EXAMINER
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LUNDGREN, JEFFREY S

ART UNIT	PAPER NUMBER
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1639

MAIL DATE	DELIVERY MODE
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05/13/2010

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/779,419	<b>Applicant(s)</b> WOLLENBERG, ROBERT H.	
	<b>Examiner</b> Jeffrey S. Lundgren	<b>Art Unit</b> 1639	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 March 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                     |                                                                   |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____                                                         | 6) <input type="checkbox"/> Other: _____                          |

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## DETAILED ACTION

### *Status of the Claims*

The Board of Patent Appeals and Interferences affirmed the following rejections against the claims:

The rejection of claims 1, 2 and 8, under 35 U.S.C. § 102(b) as being anticipated by Heneghan *et al.*, JOURNAL OF ENGINEERING FOR GAS TURBINES AND POWER-TRANSACTIONS OF THE ASME, (JUL 1993) Vol. 115, No. 3, pp. 480-485), has been affirmed.

The rejection of claims 1-6 and 8-11, rejected under 35 U.S.C. § 102(b) as being anticipated by Cherpeck, U.S. Patent No. 5,399,178, issued on March 21, 1995, has been affirmed.

The rejection of claims 1-11, under 35 U.S.C. 102(b) as being anticipated by Cherpeck 2, U.S. Patent No. 5,306,315, issued on April 26, 1994, has been affirmed.

The rejection of claims 1-6, 8-13, 15 and 17, under 35 U.S.C. § 103(a) as being unpatentable over Cherpeck, U.S. Patent No. 5,399,178, issued on March 21, 1995, in view of Burow *et al.*, U.S. Patent Application Publication No. 2002/0090320 A1, published on July 11, 2002, has been affirmed.

The rejection of claims 1-11 and 62 and 63, under 35 U.S.C. § 103(a) as being unpatentable by Cherpeck 2, U.S. Patent No. 5,306,315, has been affirmed.

The rejection of claims 1-6, 8-13, 15 and 17, under 35 U.S.C. § 103(a) as being unpatentable over Cherpeck, U.S. Patent No. 5,399,178, issued on March 21, 1995, in view of Burow *et al.*, U.S. Patent Application Publication No. 2002/0090320 A1, published on July 11, 2002, and Luttermann *et al.*, U.S. Patent No. 6,713,264, issued on March 30, 2004, has been affirmed.

The Board of Patent Appeals reversed the rejection of claim 16 under 35 U.S.C. § 112, second paragraph for being indefinite.

There are no allowed claims in the application.

In view of pending claim 16 that has not been rejected, but is not found allowable, PROSECUTION IS HEREBY REOPENED. An Office Action on the merits is set forth below.

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To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing at the end of this action.

### ***New Grounds of Rejection***

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The rejection of claim 1 under 35 U.S.C. § 102(b) as being anticipated by Heneghan has been affirm by the Board. Accordingly, only the rejection of claim 16, which depends from claim 1, is addressed below. The rejection of claim 1 over Heneghan is found in the Final Action mailed on February 11, 2008, and is hereby incorporated by reference.

Claim 16 is rejected under 35 U.S.C. § 102(b) as being anticipated by Heneghan *et al.*, JOURNAL OF ENGINEERING FOR GAS TURBINES AND POWER-TRANSACTIONS OF THE ASME, (JUL 1993) Vol. 115, No. 3, pp. 480-485).

Claim 16 depends from claim 1, and further comprises a “step of using the results of step (b) as a basis for obtaining a result of further calculations.”

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This limitation is taught by Heneghan. Heneghan summarizes that the results from the deposit formation of the sample can be “used” for further calculation:

“These observations suggested a complicated relationship between the formation of carbon deposits and the temperature-driven consumption of oxygen. A simple analysis, based on a bimolecular reaction rate, correctly accounted for the shape of the oxygen consumption curve for various fuels. This analysis yielded estimates of global bulk parameters of oxygen consumption. The test rig yielded quantitative results, which will be very useful in evaluating fuels additives, understanding the chemistry of deposit formation, and eventually developing a global chemistry model.”

Heneghan, Abstract.

Heneghan also teaches testing a number of additives in the Pheonix rig, such a JFA-A, and teaches that further testing based the results has been carried out:

“Currently, testing continues to elevate additives of four major varieties; anti-oxidants, dispersants, detergents, and metal detection.”

Heneghan, page 483, col. 2, first paragraph.

See also the mathematical model and formulae provide on page 484, cols. 1 and 2.

Heneghan finally concludes:

“In the future, it will be interesting to study the oxygen and methane behavior for fuel additives to determine whether the observed trends for oxygen, methane, and deposits continue. So far, these trends clearly suggest that the consumption of oxygen at lower temperature and the more rapid production of methane indicate fewer deposits on the test section walls.”

Heneghan, page 485, col. 1, last paragraph.

Accordingly, claim 16 is anticipated.

### ***Conclusions***

No claim is allowable.

If Applicants should amend the claims, a complete and responsive reply will clearly identify where support can be found in the disclosure for each amendment. Applicants should

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point to the page and line numbers of the application corresponding to each amendment, and provide any statements that might help to identify support for the claimed invention (*e.g.*, if the amendment is not supported *in ipso verbis*, clarification on the record may be helpful). Should Applicants present new claims, Applicants should clearly identify where support can be found in the disclosure.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Jeff Lundgren whose telephone number is 571-272-5541. The Examiner can normally be reached from 7:00 AM to 5:30 PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Christopher Low, can be reached on 571-272-0951. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Jeffrey S. Lundgren/

Primary Examiner, Art Unit 1639

/ Christopher S. F. Low /  
Supervisory Patent Examiner, Art Unit 1639

/George C. Elliott, Ph.D./  
Director, Technology Center 1600